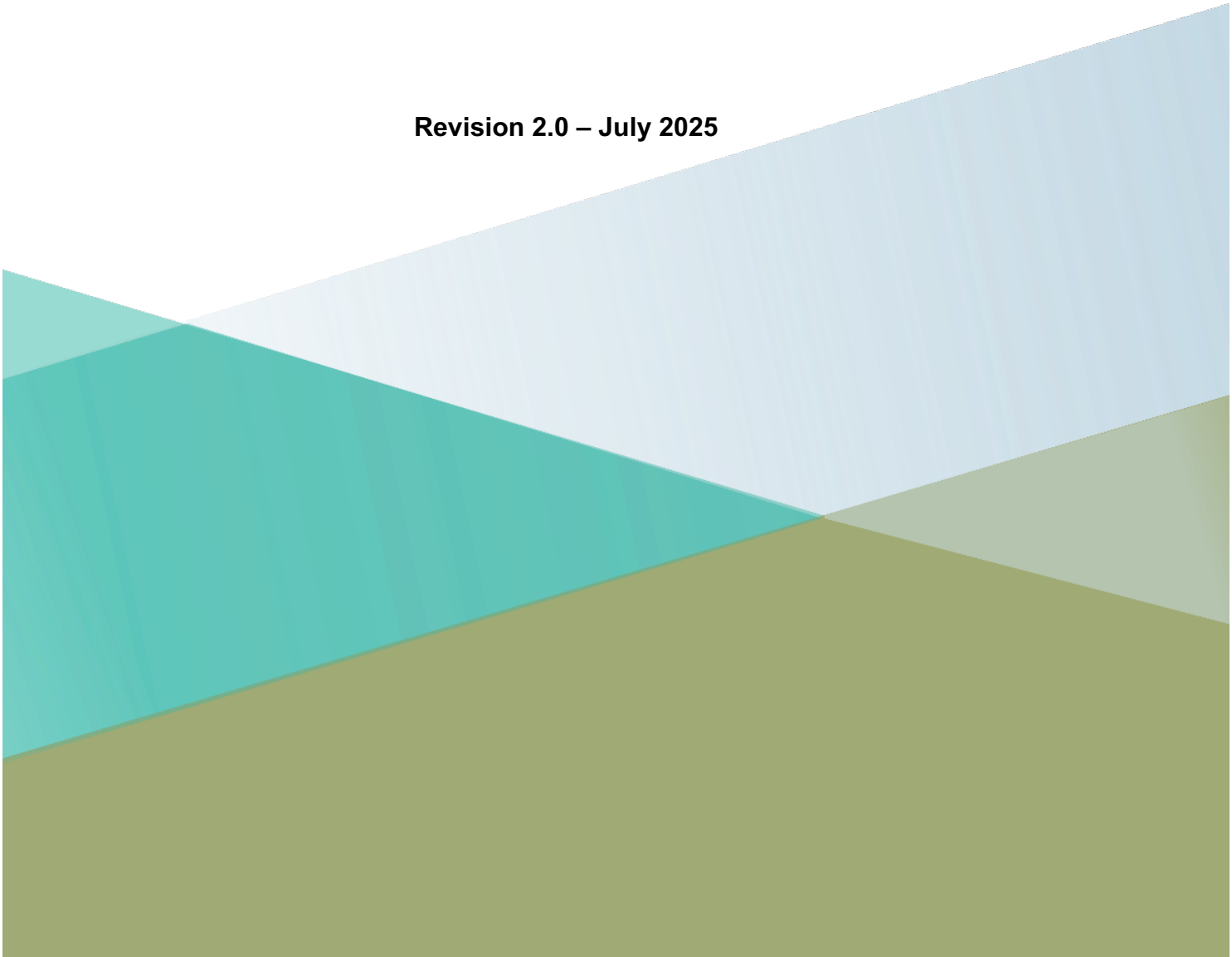
NPWS
An tSeirbhís Páirceanna Náisiúnta agus Fiadhúlra
National Parks and Wildlife Service

Application for Derogation

Under Regulation 54 & 54A of the European Communities (Birds and Natural Habitats) Regulations 2011, as amended

Revision 2.0 – July 2025



- This form can be used by any individual or Company applying for a derogation under Regulation 54 of the European Communities (Birds and Natural Habitats) Regulations 2011 ("the Regulations") **or** any individual applying on behalf of the Minister for Housing, Local Government and Heritage under Regulation 54(A) of the Regulations.

- Note this application form is not for Domestic Dwelling Derogations (bats within private homes) which can be found here > (3D Application Form)

- Please ensure that you answer questions fully in order to avoid delays and/or your application being rejected on the basis that it does not contain sufficient information and detail for the application to be considered further.

- Please read and familiarise yourself with the NPWS Guidance on Applications for Regulation 54 Derogations for Annex IV species: Guidance for Applicants

- Please read and familiarise yourself with the European Commission's Guidance document on the strict protection of animal species of Community interest under the Habitats Directive

- Please also note that the responses to these questions are supplementary to the documentation required for the NPWS to be in a position to consider your application. A complete application should include both the application form and an associated report. Failure to supply either will result in your application being returned and/or refused.

- In circumstances in which a derogation is given on foot of this application, the Applicant is responsible for ensuring compliance with the conditions of any such derogation, even though they may employ another person to act on their behalf. To carry out any activity without, or not in accordance with, a derogation granted under regulation 54 or 54A of the Regulations constitutes a criminal offence, subject to prosecution.

- If you experience any problems filling in this form, please contact the Wildlife Licensing Unit: reg54derogations@npws.gov.ie

- Please note – applications, associated reports and derogations will be published on the NPWS website and/or the Department's Open Data website.

- Where any applicant is applying for a derogation to carry out surveys, please ensure to list all qualified ecologists and trainees under their supervision. See section 1(c) of Part A.

Part A: The Applicant - Personal Details

These questions relate to the person responsible for any proposed works and who will be the **Applicant**.
If this application is being submitted on behalf of a third party, please also complete Part B below.

1. (a) Name of Applicant

Title (Mr/Mrs/Miss/Ms/Dr)	Forename(s)	Surname
Dr	Michael	Clare
(b) Company Name, if applicable	National Oceanography Centre, UK	
(c) Address Line 1	Waterfront Campus	
Address Line 2	European Way	
Town	Southampton	
County	United Kingdom	
Eircode	SO14 3ZH	
(d) Contact number	[redacted]	
(e) Email address	[redacted]	
(f) Address where works are to be carried out if different from (b) above.		
Address Line 1	Whittard Canyon and Gollum Channel offshore locations	
Address Line 2	The proposed areas in proximity and direction from shore are as follows: - Gollum Channel: 108 km south-west of Dursey Island, County Cork - Whittard Canyon: 262 km south-south-west of Mizen Head, County Cork	
Town	See above	
County	See above	
Eircode	See above	

Details of Person Submitting Application on Behalf of Applicant/Derogation Holder

Information relating to the person (e.g. ecologist) responsible for submitting the application on behalf of the applicant should be entered below:

1. (b) Name of Person/Ecologist

Title (Mr/Mrs/Miss/Ms/Dr)	Forename(s)	Surname
(b) Company Name		
Address Line 1		
Address Line 2		
Town		
County		
Eircode		

(c) Contact number	
(d) Email address	
(e) Relationship to Applicant	

For Survey Derogations Only

1. (c) Please Indicate the Names to Appear on the Derogation Along with the Position Held e.g. Supervisor/Trainee

Forename(s)	Surname	Supervisor or Trainee

Part B: Species covered by the Derogation

1. **Species of Animal:** Please indicate which species is/are the subject of the application:

- Bat ☐
- Otter ☐
- Kerry Slug ☐
- Natterjack Toad ☐
- Dolphin ☒
- Whale ☒
- Turtle ☐
- Porpoise ☒

2. Please detail the exact species (scientific name): Cetaceans that are known to have been sighted in the study areas and a conservatively assumed 20 km Zone of Influence of the study sites include: Common dolphin (*Delphinus delphis*), Common Porpoise (*Phocoena phocoena*), White-beaked Dolphin (*Lagenorhynchus albirostris*), Bottle-nosed Dolphin (*Tursiops truncates*), Risso's Dolphin (*Grampus griseus*), Fin Whale (*Balaenoptera physalus*), Humpback Whale (*Megaptera novaeangliae*), Minke Whale (*Balaenoptera acutorostrata*), Killer Whale (*Orcinus orca*), False Killer Whale (*Pseudorca crassidens*), Blue Whale (*Balaenoptera musculus*), Sperm Whale (*Physeter macrocephalus*).

   Based on documents from the National Parks & Wildlife Service (NPWS), we understand that the Belgica Mound Province Special Area of Consideration (that lies within 50 km of the Gollum Channel study site) is designated with respect to two cetacean species — Bottlenose Dolphin (*Tursiops truncatus*) and Harbour Porpoise (*Phocoena phocoena*). Although infrequent, there are live cetacean recordings within the Belgica Mound Province SAC including Common dolphin (*Delphinus delphis*), Common Porpoise (*Phocoena phocoena*), False Killer Whale (Pseudorca crassidens), Fin Whale (Balaenoptera physalus), White-beaked Dolphin (*Lagenorhynchus albirostris*), and Bottle-nosed Dolphin (Tursiops truncates). Regarding cetaceans, this region qualifies as an SAC for Annex II listed species including Bottle-nosed Dolphin (*Tursiops truncates*) and Common Porpoise (*Phocoena phocoena*).

   The Southern Canyons cSAC, which overlaps with our study area in Whittard Canyon, does not formally list cetaceans as Qualifying Interests, however, deep-diving whales and dolphins are known to use the canyon habitat. The NGO Irish Whale & Dolphin Group (IWDG) indicates that the Southern Canyons region (including the off-shelf canyons like the Whittard Canyon) is a suitable habitat for Long-finned pilot whales (*Globicephala melas)* and different species of beaked whales. The IWDG also note a presence of common dolphins and harbour porpoise in wider Irish deep waters. Though not explicitly confirmed for the specific cSAC, they are plausible given the offshore habitat.

   Leatherback Turtles (*Dermochelys coriacea*) are recorded sporadically around the Irish coastline. No occurrences were identified within or immediately surrounding the proposed Whittard Canyon study area, and only three individual sightings have been documented within the Gollum Channel site.

   Coastal otters use nearshore marine habitats for foraging and feeding at certain times of the year. The proposed study areas lie at least 100 km offshore and are therefore well beyond the typical range of otter commuting or foraging activity. In addition, no otter records exist within the proposed survey locations.

3. Please provide the maximum number of individuals affected* not known

4. Please provide the maximum number of breeding or resting sites affected* N/A

5. Please provide the maximum number of eggs to be taken* None

6. Please provide the maximum number of eggs to be destroyed* None

*If no figures can be provided for the maximum number of individuals, breeding sites, resting places and eggs to be covered by the derogation please provide reasons why.

The precise numbers of individuals potentially affected by the use of marine acoustic sources is not possible to quantify – see attached report for further details

7. **Species of Plant:** Please indicate which species is/are the subject of the application:

- Killarney Fern ☐
- Slender Naiad ☐
- Marsh Saxifrage ☐

8. If you previously received a derogation for any species of animal or plant, please state derogation number and confirm that you have made a return to NPWS on the numbers actually affected by that derogation.

N/A

9. **Proposed Dates for Activities:** Please indicate the timeframe that you propose to carry out the activities. Dates set by NPWS may differ from dates proposed here. *A derogation will only be issued with a start and end date within a calendar year.*

Start Date:	26th June 2026
End Date:	3rd August 2026

Note: The proposed marine survey activities will take place on the RRS James Cook from 26th June (depart Southampton, UK) to 3rd August 2026 (return to Southampton, UK), which will involve deployment of oceanographic moorings (to be recovered approx. 12 months later), seafloor and water column surveys (including 4 week-long deployment of a subsurface autonomous glider, several up to 30 hour-long deployments of an AUV) and sediment sampling.

A subsequent 30 day offshore marine survey is proposed for Summer 2027 to recover the oceanographic moorings and to perform repeat seafloor and water column surveys and sediment sampling.

The dates for the second marine survey are not yet scheduled by the UK National Marine Facilities programme (the vessel will either be the RRS James Cook or the RRS Discovery); hence, we request a licence from June 2026-December 2027 to ensure this captures the planned work in case of schedule changes.

Part C: Nature of the Derogation.

1. Please tick which prohibition(s) the application for a derogation relates to:

Regulation 51	
Deliberately capture or kill any specimen of the relevant species in the wild	☐
Deliberately disturb these species particularly during the period of breeding, rearing, hibernation and migration	☒
Deliberately take or destroy eggs of the relevant species in the wild	☐
Damage or destroy a breeding or resting place of such an animal, or	☐
Keep, transport, sell, exchange, offer for sale or offer for exchange any specimen of the relevant species taken in the wild, other than those taken legally as referred to in Article 12(2) of the Habitats Directive.	☐
Regulation 52	
Deliberately pick, collect, cut, uproot or destroy any specimen of these species in the wild, or	☐
Keep, transport, sell, exchange, offer for sale or offer for exchange any specimen of these species taken in the wild, other than those taken legally as referred to in Article 13(1)(b) of the Habitats Directive.	☐

Further information should be provided in the format set out in Part E: Template for Supporting Information

Part D: Derogation Tests

Note: The following <u>summary</u> information must be provided by the applicant in all cases, and will be used to determine if a derogation can be provided. Further information must be provided in the format set out in Part E: Template for Supporting Information

Test 1: Reason for the Derogation

1. Please tick which reason(s) below explains how this application qualifies under Regulation 54(2)(a-e) or Regulation 54A(2)(a-e) of the European Communities (Birds and Natural Habitats) Regulations: Please provide a summary of how the application meets the 3 conditions required to provide a derogation. Note that in all cases additional information must be provided (see Part E).

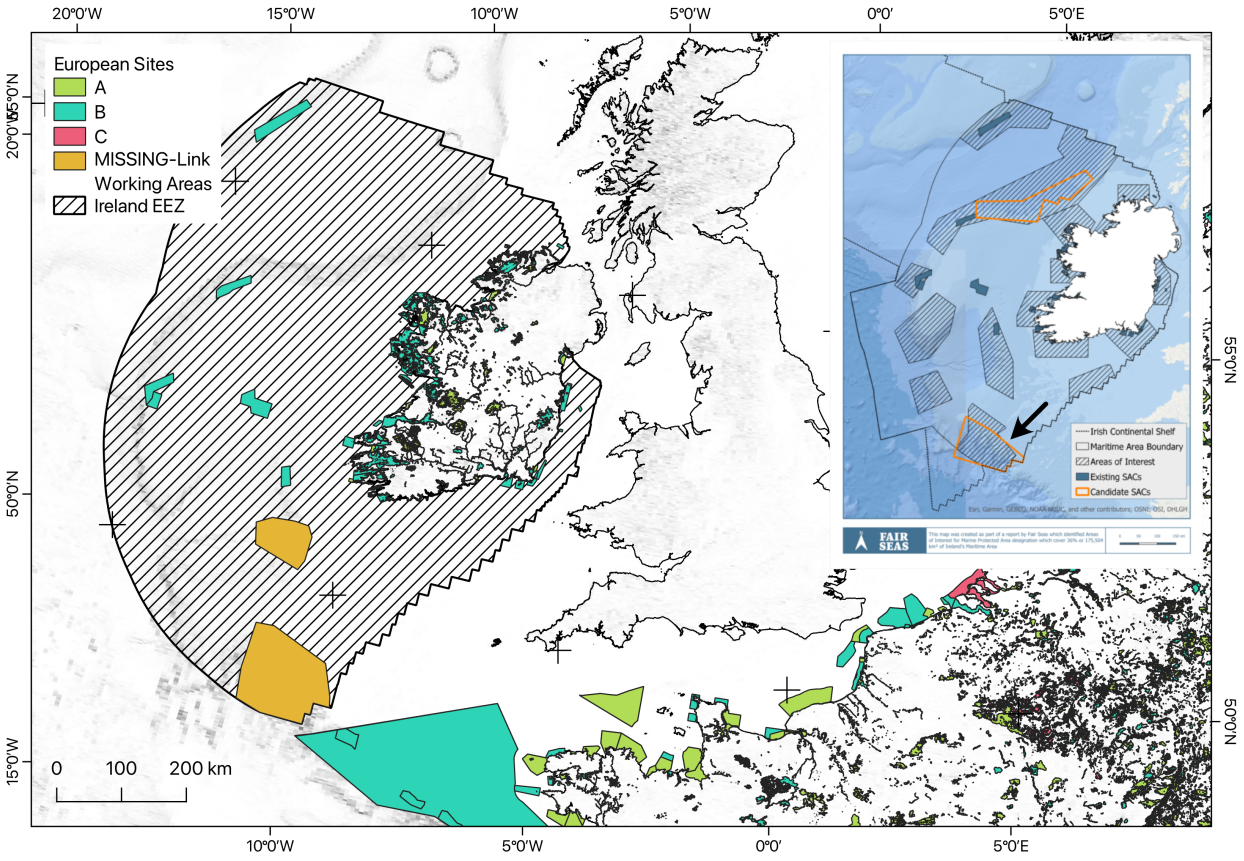
a.	In the interests of protecting wild flora and fauna and conserving natural habitats **(proceed to 2a)**	☒
b.	To prevent serious damage, in particular to crops, livestock, forests, fisheries and water and other types of property **(proceed to 2b)**	☐
c.	In the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment **(proceed to 2c)**	☐
d.	For the purpose of research and education, of re-populating and re-introducing these species and for the breeding operations necessary for these purposes, including artificial propagation of plants **(proceed to 2d)**	☒

e.	To allow, under strictly supervised conditions, on a selective basis and to a limited extent, the taking or keeping of certain specimens of the species to the extent specified therein, which are referred to in the First Schedule **(proceed to 2e)**	☐

2a. In the interests of protecting wild flora and fauna and conserving natural habitats:

i) Please state the wild flora, fauna or habitats that require protection and /or conservation.

The database of Natura sites was compared to the full extents of our proposed working areas. There are no overlaps between existing SCIs, SPAs or SACs. However, the Southern Canyons (NPWS 2023) candidate SAC (cSAC) overlaps with the southern of our two proposed working areas (Whittard Canyon). An overview of the Southern Canyons cSAC is provided below. The locations of existing and planned European Sites in the region are shown below.



working locations for this expedition. Inset shows the location of the candidate SAC for the Southern Canyons (https://www.cmscoms.com/?p=33071) - the inset map shows the Maritime Area Boundary extents while the main map shows the mapped EEZ

The Southern Canyons cSAC

The Southern Canyons cSAC is a candidate Special Area of Conservation located about 280 kilometres south of Counties Kerry and Cork. It contains a large system of deep-sea canyons, including the Whittard Canyon, which is comparable in scale to the Grand Canyon. The site features a mixture of hard rocky ground and soft sediments, with highly diverse deep-water fauna.

A major survey in 2019 using the RV Celtic Explorer and the Holland I ROV carried out 50 dives and mapped the canyon terrain in great detail. The site is designated for the Annex I habitat "Reefs."

The site is a candidate Special Area of Conservation for the Annex I habitat "Reefs."

Furthermore, the site is considered of high conservation importance due to its unique deep-sea canyon habitats and diverse benthic communities. The ecology is varied, with hard rocky substrates, soft sediments, and strong influences from bottom currents and marine snow. Species of interest include:

- Sea fans (e.g., *Distichoptilum*)
- Soft corals (e.g., *Anthomastus*, clavulariids, *Acanthogorgia*)
- Sea pens (*Pennatula*, *Kophobelemnon*)
- Bamboo corals (*Acanella*)
- Desmophyllum and Madrepora coral clumps
- Pteropod burrows, echinoids (*Cidaris*), anemones, hermit and galatheid crabs
- Diverse fish including elasmobranchs, grenadiers, orange roughy, and eels

The cSAC boundary is designed to encompass these unique canyon habitats and the site is recognised for its significant conservation value. We will be acquiring scientific data to help characterise this important setting, which is required for effective conservation of these species and habitats.

ii) Please summarise how the interests of protection and conservation of the species/habitat concerned justify affecting another species under strict protection.

This project will deploy oceanographic moorings, collect sediment samples, and acquire AUV/Glider and vessel based geophysical and photographic data in this region that will help to better understand background environmental conditions, map seafloor conditions, and characterise the transport of pollutants such as microplastics.

We have discussed the value of this research with Dr Lucy Harding (Marine Ecologist - Scientific Advice and Research Directorate, An tSeirbhís Páirceanna Náisiúnta agus Fiadhúlra - National Parks and Wildlife Service) and will ensure all data and findings are shared with her team, specifically with reference to:

- Improved understanding of natural particle, nutrient, carbon and pollutant transport from the shelf to the deep sea.
- Providing baseline and process-based data for key deep-sea habitats that are currently poorly understood.
- Directly supporting implementation of the MSFD and related EU environmental directives, which the NMPF explicitly uses as a foundation for its Environmental – Ocean Health objective.

Our proposed project aims will assist in providing a more detailed environmental characterisation in key deep-sea sites in Irish waters that will provide significant benefits associated high level objective "Environmental Ocean Health (Policy1)", which is particularly well-aligned with UN Sustainable Development Goal 14 (Life Below Water) and the Marine Strategy Framework Directive (MSFD) of the European Union (Directive 2008/56/EC) and Commission Decision (ED) 2017/848. These policies, goals and directives underpin Ireland's MSFD, which aims to determine, achieve and maintain Good Environmental Status (GES) based on 11 qualitative condition descriptors, which in turn inform the environmental aspects of maritime spatial planning under Directive 2014/89/EU. Our proposed project will

provide new data that align with several of these condition descriptors, which are important for the assessment of GES and are outlined below.

Descriptor 1 (Marine biodiversity): The MSFD objective is to ensure that "The quality and occurrence of habitats and the distribution and abundance of species are in line with prevailing physiographic, geographic and climatic conditions". Our project will acquire high resolution seafloor maps (using an Autonomous Underwater Vehicle that will provide unprecedented resolution of the seafloor) and video surveys (using a Remotely Operated Vehicle) that can be used as the basis for detailed habitat mapping within important deep-sea features – namely the submarine canyons of Whittard Canyon and Gollum Channel that provide important physical habitats and that are known to host important deep-sea biodiversity. These can be compared against previous surveys to ascertain whether or how health and biodiversity has changed and to provide a new high quality baseline to compare with future surveys. This biodiversity includes cold-water coral species that locally occur on hard substrate within the planned study areas, with activities being carefully planned to ensure that the placement of moorings and physical sampling does not interact with such organisms and their habitats. We recognise that Ireland is seeking to improve its knowledge of deep-sea habitats through a (e.g. through Integrated Mapping for the Sustainable Development of Ireland's Marine Resource (INFOMAR) and we will provide data that we acquire to contribute towards this initiative, which links to Ireland's Habitats Directive and informs marine spatial planning. Out proposed project links closely to the Objective 5 of Ireland's National Biodiversity Action Plan 2017-2021 that aims to "conserve and restore biodiversity and ecosystem services in the marine environment" with a specific goal aiming to "implement measures to achieve good ecological and environmental status of marine and coastal habitats as required by the Habitats, Directive, Water Framework Directive and Marine Strategy Framework Directive (MSFD) and in line with the OSPAR Convention (Convention for the protection of the marine environment in the North- East Atlantic)".

Descriptor 6 (Seabed integrity): The MSFD objective is that **"**Sea-floor integrity is at a level that ensures that the structure and functions of the ecosystems are safeguarded and benthic ecosystems, in particular, are not adversely affected". The proposed project will involve detailed video surveys of the seafloor within Whittadr Canyon that will provide scientifically valuable datasets that can be used to provide a baseline – and shallow seafloor sediment sampling (using box coring or multicoring) will acquire samples that will be analysed to assess the levels of organic carbon and nutrients that are important to understand the services provided by the seafloor to deep-sea ecology. The quantification of organic carbon content in seafloor sediments is also important to ascertain the role deep-sea settings such as canyons play in sequestering carbon, which links to the MSFD Policy on climate change, which recognises the need to understand the service played by the seafloor in locking up carbon.

Descriptor 7 (Hydrographical conditions): The MSFD objective is to ensure that "permanent alteration of hydrographical conditions does not adversely affect marine ecosystems". In order to assess this, there is first a need to characterise the ranges in background natural hydrographical conditions, yet such monitoring or measurement in deep-sea settings such as Whittard Canyon and Gollum Channel is sparse and even when performed, is rarely close to the seafloor nor over a sustained period of time. The proposed project will undertake first of their kind measurements of near-seafloor currents (vertically resolved from 0-30 m above seafloor at 5 locations in Irish waters) to make unique measurements of internal tides and turbidity currents that transport nutrients, natural sediment, pollutants and oxygenated waters between shallow and deep waters, and modulate the local temperature. These measurements will provide scientifically valuable data that will update the understanding of these deep sea sites and inform future planning and decision making.

Descriptor 8 (Contaminants) and Descriptor 10 (Marine litter): The MSFD objectives include ensuring "concentrations of contaminants are at levels not giving rise to pollution effects", "concentration of contaminants in marine matrices assessed in accordance with

OSPAR Coordinated Environmental Monitoring Programme (CEMP) do not exceed OSPAR Environmental Assessment Criteria (EAC) and concentrations are not increasing", "properties and quantities of marine litter do not cause harm to the coastal and marine environment", "the composition, amount and spatial distribution of litter in the coastline, and on the seabed, are at levels that do not cause harm to the coastal or marine environment" and "the composition, amount and spatial distribution of litter in the coastline, and on the seabed, are at levels that do not cause harm to the coastal or marine environment". For all of these, there is a need to build an evidence base but this is currently sparse in the deep-sea. Recent studies have proven that deep-sea canyons and channels can be the focal point for pollutant and litter transport and accumulation, but with little understanding of sources, pathways and locations of pollution/litter accumulation on the seafloor. Commission Decision 2017/848 stated that establishing that the "properties and quantities of marine litter do not cause harm to the coastal and marine environment" is central to determining good environmental status. The MSFD states "The extent of the marine litter problem and the harm it causes to the environment has yet to be fully established and is subject to ongoing research, although the scale of marine litter pollution is concerning". Commission Decision 2017/848 also requires micro litter to be considered, building on the EU Joint Research Council (JRC) report Harm Caused by Marine Litter. Through seafloor mapping and sampling, our proposed project aims to address this knowledge gap and develop a new understanding that will feed into assessment of contaminant (including microplastics) and litter type and concentration in the deep sea, its spatial extent relative to key seafloor ecosystems and habitats, how it is transported and its ultimate fate. Our proposed project links directly to Objective 2 of Ireland's National Biodiversity Action Plan 2017-2021 that aims to "strengthen the knowledge base for conservation, management, and sustainable use of biodiversity" with a specific goal to "conduct research into the threat posed to Ireland's marine biodiversity by marine litter including microplastics".

Descriptor 11 (Energy including underwater noise): The MSFD aims to ensure that the "introduction of energy, including underwater noise, is at levels that do not adversely affect the marine environment". Our proposed project will involve the use of directional, high frequency acoustic sources that generate some underwater noise which underpins this derogation application and our proposed mitigation strategy.

2b) To prevent serious damage, in particular to crops, livestock, forests, fisheries and water and other types of property:

i) Please summarise the nature of the potential damage, why it is considered "serious" and how this outweighs the conservation interest of the species under strict protection.

2c) In the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment:

i) Where the reason is for public health and public safety, summarise the evidence provided to support this reason (e.g. documentary evidence of the risk from a chartered structural engineer, tree surgeon, Garda Síochána, qualified health professional etc.)

ii) Where the reason is for "other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment", summarise the nature of the public interest and how this outweighs the conservation interest of the species under strict protection.

2d) For the purpose of research and education, of re-populating and re-introducing these species and for the breeding operations necessary for these purposes, including artificial propagation of plants:

i) Please summarise the objective(s) of the proposed activities making reference to those listed above and how the the purpose of such activities overrides the interests of strict protection of the species. [1]

Datasets generated from this project will be made available as open accessible dataset via the British Ocean Data Centre, and the offshore research campaigns and data generated will also provide opportunities for Irish and international early career researchers (in particular PhD and MSc researchers). Irish academic collaborators include:

Professor Andrew Wheeler - Chair of Geology, Head of Geology, School of Biological, Earth and Environmental Sciences, University College Cork, North Mall Campus, Distillery Fields, Cork, Ireland

Dr Martin White - Senior Lecturer, School of Natural Sciences, Earth & Ocean Sciences Ryan Institute, University of Gallway.

Dr Aaron Lim, PhD - Lecturer in Marine Geoscience, Principal Investigator, Environmental Research Institute, Department of Geography, University College Cork

This project also includes wide international collaboration, which will widen the impact of the research and educational reach of the project, including: Dr Robert Hall, Scottish Association of Marine Science (SAMS); Dr Ian Kane, Manchester University (UK); Esther Sumner, University of Southampton (UK); Dr Furu Mienis, Royal Netherlands Institute for Sea Research (Netherlands); Dr Sophie Hage, University of Brest (France); Dr Claudio Lo Iacono, Spanish National Research Council, ICM-CSIC (Spain).

[1] Note that this reason may be appropriate for when research involves surveys that may cause disturbance of species under strict protection. But the sole purpose of the surveys should be for research and education or the other reasons listed above under 1d.

2e) To allow, under strictly supervised conditions, on a selective basis and to a limited extent, the taking or keeping of certain specimens of the species to the extent specified therein, which are referred to in the First Schedule

i) Please clearly state the objective of the activity and verify that this reason is being chosen as the objective of the activity does not match reasons a-d listed above.

ii) Please summarise how the activity will result in the taking or keeping of limited numbers of specimens of the species, how it will be applied on a selective basis and to a limited extent, and how it will be done under strictly supervised conditions.

Test 2: Absence of Alternative solutions

2. Please summarise the alternative solutions that have been considered and why these solutions are deemed unsatisfactory. This must include the option of the "do-nothing" alternative and evidence should be objective and robust. Note that in all cases further information must be provided in the format set out in Part E: Template for Supporting Information.

Alternative Solution	Reasons for "Unsatisfactory"
Do-Nothing	Acoustic sources are required for detailed seafloor mapping and monitoring seafloor currents and oceanographic conditions, which are essential to understand background environmental conditions and to monitor the transport of pollutants relative to important seafloor habitats.

Alternatives to Field Deployment Are Not Technically or Scientifically Feasible	The project involves studying deep-water turbidity currents, sediment fluxes, and high-resolution benthic habitat structures that: • Cannot be modelled reliably, • Cannot be captured by remote sensing, and • Cannot be evaluated using non-contact methods alone. Direct seabed sediment sampling and mooring deployment are scientifically indispensable. No remote or desk-based alternative can replace these.
Alternative Locations Were Considered but Are Inappropriate	Whittard Canyon and Gollum Channel were selected because: • They represent the best representative land-detached canyon systems suitable for studying the target processes, • They overlap with previously monitored sites, giving continuity with long-term data. The Southern Canyons cSAC overlap does not create alternative feasible locations, because the features requiring study are intrinsically located within this canyon system.
Operational Alternatives Were Considered and Minimized	The project design specifically reduces potential impacts by: • Using short moorings with no surface expression, • Conducting phased geophysical surveys first to avoid sensitive habitats, • Restricting all direct sampling to small-footprint equipment (<1 m² per deployment), • Avoiding steep slopes and known coral habitats based on existing mapping, and • Restricting AUV and acoustic operations to short, discrete deployment periods. These refinements ensure that the remaining activities are the *minimum necessary* for the project objectives.

Test 3: Impact of a Derogation on Conservation Status

3. Please summarise the possible impacts on the population of the species that is subject to this application, taking into account all the mitigation and/or compensation measures that are to be undertaken. Evidence that such mitigation has been successful elsewhere should be provided

where relevant. Mitigation measures being relied upon must ensure that the derogation will not be detrimental to the maintenance of the populations of the species to which the Habitats Directive relates at a favourable conservation status in their natural range. Note that in all cases further information must be provided in the format set out in Part E: Template for Supporting Information.

For the species listed at the start of this application, the only plausible impact pathways for the proposed scientific survey activities are:

1. Underwater noise from survey operations (geophysical surveys and acoustic instruments)
2. Localised physical disturbance of seabed habitats and associated benthic fauna**,** including potential for very localised, short-term turbidity plumes
3. Vessel presence and collision risk at the surface

We now discuss these specific activities with relevance to risks posed to the different species identified earlier.

Cetaceans

Underwater Noise

Underwater noise has the potential to disturb, harm, or injure marine mammals, depending on the noise type, frequency, intensity, and the distance between the source and the receptor. Cetaceans are particularly sensitive to sound, relying on it for navigation, communication, and perceiving their environment. Their behavioural responses to noise vary with context and individual characteristics such as experience, motivation, conditioning, and current activity (Southall et al., 2007). It is therefore essential to assess the potential effects of any introduced sound source on a case-specific basis (NPWS, 2014).

As sound travels through the water, it dissipates with increasing distance from the source, and its propagation is shaped by local oceanographic conditions. Exposure to sufficiently high noise levels can cause auditory injury in marine mammals, ranging from a temporary reduction in hearing sensitivity—Temporary Threshold Shift (TTS)—to a more lasting impairment, known as Permanent Threshold Shift (PTS). The likelihood of such effects depends on how the noise frequency aligns with the species' hearing range and on the duration of exposure. Ultimately, the Sound Exposure Level (SEL) received by an individual determines the magnitude of potential impact.

Table 1 below summarises the hearing-related functional groups relevant to the majority of cetacean species occurring in Irish waters.

Table 1: Cetacean functional groups relative to hearing at different sound frequencies

Low frequency 7 Hz-22 kHz	**Mid-frequency** 150 Hz-160 kHz	**High frequency** 200 Hz–180 kHz
Baleen whales	Most toothed whales, dolphins	Certain toothed whales, porpoise
Species – Ireland Humpback whale Blue whale Fin whale Sei whale Minke whale	**Species – Ireland** Sperm whale Killer whale Long-finned pilot whale Beaked whale species Dolphin species	**Species – Ireland** Pygmy sperm whale Harbour porpoise

Based on NPWS (2014). Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters.

Table 2 presents the sound-pressure level thresholds for the relevant functional hearing groups, based on Southall et al. (2007) and the subsequent refinements introduced by Southall et al. (2019), which maintain broadly comparable injury criteria for the purposes of this assessment.

Table 2: Sound pressure levels associated with Temporary Threshold Shift (TTS) and Permanent Threshold Shift (PTS)

Functional group	**Injury Criteria (based on a single pulse)**	
	TTS	**PTS**
Low frequency cetaceans	224 dB re: 1 µPa (peak)	230 dB re: 1 µPa (peak)
Mid frequency cetaceans	224 dB re: 1 µPa (peak)	230 dB re: 1 µPa (peak)
High frequency cetaceans	224 dB re: 1 µPa (peak)	230 dB re: 1 µPa (peak)
Pinnipeds (in water)	212 dB re: 1 µPa (peak)	218 dB re: 1 µPa (peak)

The frequencies used by the shipboard multibeam echosounder, the ADCP (45 kHz), and the USBL (19–34 kHz) fall within the hearing ranges of Bottlenose Dolphin and Harbour Porpoise, and could therefore cause temporary behavioural responses if these species are present during survey operations. The USBL and sub-bottom profiler frequencies also overlap with the hearing ranges of low-frequency cetaceans such as Humpback and Minke Whales, which may occur within the wider study areas. Although noise from this equipment is unlikely to propagate beyond approximately 3 km from the relatively small survey sites, a precautionary 20 km Zone of Influence has been adopted. Given the extensive availability of alternative foraging habitat in the region, significant impacts on these species are considered unlikely; however, temporary disturbance to Bottlenose Dolphin, Harbour Porpoise, Humpback Whale, and Minke Whale remains possible—particularly within the Gollum Channel study area, which lies closest to the Belgica Mounds Province SAC.

It should also be noted that multibeam echo-sounders will not be deployed within the Belgica Mounds Province SAC. Even if they were, the planned operating frequency of 30 kHz lies outside the functional hearing range of cetaceans. The USBL operates within the hearing ranges of Bottlenose Dolphin, Harbour Porpoise, Humpback Whale, and Minke Whale, however the noise generated is low intensity and short duration. As a result, noise from the multibeam echosounder and USBL will not affect Annex II/IV cetaceans within this protected area, which is more than 50 km away from the proposed study area in Gollum Channel and >210 km away from the Whittard Canyon study area. The ADCP, however, is hull-mounted and produces noise within the hearing range of Bottlenose Dolphin and Harbour Porpoise. Despite this, the availability of extensive alternative habitat and mobile nature of the species concerned means that survey-related noise is unlikely to have significant impacts on either species.

With regards to the local sediment sampling that is proposed, the act of lowering and retrieving a gravity or box corer does not in itself generate high-level impulse or tonal noise**.** The corer is lowered slowly through the water column on a wire. The device penetrates the seabed under its own weight (and optional additional weights), taking a discrete sediment sample. After penetration, the corer is recovered back to deck for processing.

Noise emissions are those of:

- Normal vessel propulsion / dynamic positioning system; and
- Occasional winch noise transmitted into the hull.

These sources are:

- Broadband, continuous and comparable to typical commercial shipping or research vessel operations;
- Orders of magnitude lower than seismic airgun arrays or pile-driving in terms of peak source level and sound exposure level;

- Localised around the vessel and temporally short-lived at each station.

As NPWS (2014) guidance on man-made sound emphasises, the highest risk to marine mammals arises from high-intensity impulsive sources (airguns, impact piling, explosives), with vessel noise and low-power scientific systems generally representing a low to moderate risk**,** managed through standard good practice.

- Coring operations are short in duration at each station;
- Sources are comparable to routine vessel operation, which cetaceans and turtles already experience widely; and
- Sampling occurs in deep offshore waters with no resident Annex II marine mammals designated as site features in the immediate area (other than near to the Belgica Mound Province SAC),

Therefore, the incremental noise contribution from sediment coring is considered negligible relative to the wider shipping / survey noise environment. It is **h**ighly unlikely to cause injury (PTS/TTS) or significant behavioural disturbance to Annex IV species at population or site level.

Physical disturbance of seabed

With regards to seafloor disturbance, the only activities to be employed that will interact with the seafloor are associated with sediment sampling (i.e. piston coring, box coring) which only remove a very small footprint of seabed**:**

- Piston corer: ~0.15 m diameter → disturbance footprint ~0.05 m² per core;
- Box corer: ~0.5 x 0.5 m, plus frame → ~1 m² per core.
- Mega corer: frame diameter ~1m
- Mooring anchor: max 1m diameter

Even with multiple replicate cores per station, the total area disturbed is **very small relative to the scale of canyon / basin habitats (many km²)**. Effects include:

- Removal of a small volume of sediment and associated infauna/epifauna;
- Localised seabed compaction or minor penetration marks.

Annex IV cetaceans do not depend directly on the deep benthic community at these depths for foraging (their prey are primarily pelagic / epipelagic), so this disturbance pathway does not translate into a meaningful effect on their foraging habitat or prey base. Any effect is limited to deep benthic invertebrates and associated demersal fauna**,** not Annex IV species.

Turbidity / sediment plumes

Penetration and recovery of corers may generate a **small plume of resuspended sediment:**

- Spatially confined to **a** few tens of metres around the coring point and much smaller than natural sediment transport events known to occur in and around the canyon/channel systems**;**
- Temporally limited (minutes to at most hours) before particles resettle;
- Density contrast is minimal in the deep-water column and unlikely to propagate far.

Vessel presence and collision risk

During sediment coring and other scientific activities, the research vessel operates at very low speed or remains on station. Collision risk is therefore:

- Lower than during transit, because propeller and hull are moving slowly;
- Comparable to that of any stationary or slow-steaming vessel in offshore waters.

Standard marine mammal (e.g. maintaining a vigilant watch, adherence to safe vessel speed when animals are observed near the bow) is sufficient to keep collision risk for Annex IV species extremely low.

Otters

Underwater Noise

Otters are not acoustically adapted for underwater hearing, though experimental studies have shown that they may exhibit behavioural reactions to certain underwater sounds. In practice, otters forage very close to shore—typically within 100 m of the coastline. While occasional records exist of individuals occurring 200–300 m offshore around the UK, such instances are considered atypical. As the proposed survey sites are located more than 100 km from land, they lie well beyond the commuting and foraging range of otters. Accordingly, impacts on this species from the proposed survey operations are not considered possible.

Furthermore, no spatial overlap is anticipated between the proposed activities and any otter foraging or commuting habitat; therefore, no additional assessment of potential impacts is required.

Reptiles (Marine Turtles)

Given the very limited number of marine turtle records within the proposed study areas and the overall scale and nature of the project, impacts on marine reptiles are not considered possible. Nonetheless, standard marine-mammal observation protocols—such as maintaining a vigilant lookout and reducing vessel speed when animals are sighted near the bow—are sufficient to ensure that collision risk for Annex IV species, including turtles, remains extremely low. In addition, turtles do not rely on deep-water benthic communities for foraging, as their prey is primarily pelagic or epipelagic. Consequently, any disturbance associated with the small-scale sediment sampling proposed would not have a meaningful effect on turtle foraging habitat or prey availability.

Conclusion

Based on the available evidence and accounting for a conservative, worst-case assessment of the proposed survey equipment, the project is not expected to cause behavioural disturbance or Temporary Threshold Shift (TTS) in cetaceans that may occur in the survey area. The identified risks are similarly not applicable to other species such as otters or bats.

Under Article 12 of the EU Habitats Directive, Member States must ensure the strict protection of Annex IV species, including the prohibition of “deliberate disturbance,” particularly during sensitive periods such as breeding, rearing, hibernation, and migration.

Although no potential impacts have been identified, and in keeping with the precautionary principle, the mitigation measures below are recommended to prevent any risk of disturbance to the species mentioned above and will be applied should the project proceed.

Proposed Mitigation

NPWS (2014) provide guidance to manage the risk to marine mammals from human-made sound sources in Irish waters. This document provides guidance and mitigation measures to address key potential sources of anthropogenic sound that may impact negatively on marine mammals in Irish waters. The mitigation methods will follow the guidance prescribed by the National Parks and Wildlife Service. Specifically, in relation to geophysical acoustic surveys, which are included in this project, the guidance set out in NPWS (2014), as stated below, will be fully implemented.

1. A qualified and experienced marine mammal observer (MMO) shall be appointed to monitor for marine mammals (as well as for turtles and diving birds as appropriate) and to log all relevant events using standardised data forms (Appendix 6, NPWS, 2014).
2. Unless information specific to the location and/or plan/project is otherwise available to inform the mitigation process (e.g., specific sound propagation and/or attenuation data) and a distance modification has been agreed with the Regulatory Authority, acoustic surveying using the above

equipment shall not commence if marine mammals are detected within a 500 m radial distance of the sound source intended for use, i.e., within the Monitored Zone.

Pre-Start Monitoring

3. Sound-producing activities shall only commence in daylight hours where effective visual monitoring, as performed and determined by the MMO, has been achieved. Where effective visual monitoring, as determined by the MMO, is not possible the sound-producing activities shall be postponed until effective visual monitoring is possible.
4. An agreed and clear on-site communication signal must be used between the MMO and the Works Superintendent as to whether the relevant activity may or may not proceed, or resume following a break (see below). It shall only proceed on positive confirmation with the MMO.
5. In waters up to 200m deep, the MMO shall conduct pre-start-up constant effort monitoring at least 30 minutes before the sound-producing activity is due to commence. Sound-producing activity shall not commence until at least 30 minutes have elapsed with no marine mammals detected within the Monitored Zone by the MMO.
6. Where operations occur in waters greater than 200m depth (i.e., >200m), pre-start-up monitoring shall be conducted at least 60 minutes before the activity is due to commence. Sound-producing activity shall not commence until at least 60 minutes have elapsed with no marine mammals detected within the Monitored Zone by the MMO.
7. This prescribed Pre-Start Monitoring shall subsequently be followed by a Ramp-Up Procedure which should include continued monitoring by the MMO.

Ramp-up Procedure

8. In commencing an acoustic survey operation using the proposed acoustic equipment, the following Ramp-up Procedure (i.e., “soft-start”) must be used, including during any testing of acoustic sources, where the output peak sound pressure level from any source exceeds 170 dB re: 1µPa @1m:
    a. Where it is possible according to the operational parameters of the equipment concerned, the device’s acoustic energy output shall commence from a lower energy start-up (i.e., a peak sound pressure level not exceeding 170 dB re: 1µPa @1m) and thereafter be allowed to gradually build up to the necessary maximum output over a period of 20 minutes.
    b. This controlled build-up of acoustic energy output shall occur in consistent stages to provide a steady and gradual increase over the ramp-up period.
    c. Where the acoustic output measures outlined in steps (a) and (b) are not possible according to the operational parameters of any such equipment, the device shall be switched “on” and “off” in a consistent sequential manner over a period of 20 minutes prior to commencement of the full necessary output.

9. In all cases where a Ramp-Up Procedure is employed the delay between the end of ramp-up and the necessary full output must be minimised to prevent unnecessary high-level sound introduction into the environment.
10. Once the Ramp-Up Procedure commences, there is no requirement to halt or discontinue the procedure at night-time, nor if weather or visibility conditions deteriorate nor if marine mammals occur within a 500 m radial distance of the sound source, i.e., within the Monitored Zone.

Line Changes

11. Where the duration of a survey line or station change will be greater than 40 minutes, the activity shall, on completion of the line/station being surveyed, either:

(a) shut down and undertake full Pre-Start Monitoring, followed by a Ramp-Up Procedure for recommencement, or

(b) undergo a major reduction in seismic energy output to a lower energy state where the output peak sound pressure level from any operating source is 165-170 dB re: 1µPa @1 m, and then undertake a full Ramp-Up Procedure for recommencement. It is important that this significant reduction in sound output is to a minimum point (i.e., minimum peak sound pressure level) that in theory remains audible above most ambient sound and shipping noise and yet is also consistent with the Ramp-up Procedure.

12. Where the duration of a survey line or station change will be less than 40 minutes the activity may continue as normal (i.e., under full seismic output).

Breaks in sound output

13. If there is a break in sound output for a period greater than 30 minutes (e.g., due to equipment failure, shut-down, survey line or station change) then all Pre-Start Monitoring and a subsequent Ramp-up Procedure (where appropriate following Pre-Start Monitoring) must be undertaken.
14. For higher output survey operations which have the potential to produce injurious levels of underwater sound as informed by the associated risk assessment, there is likely to be a regulatory requirement to adopt a shorter 5–10-minute break limit after which period all Pre-Start Monitoring and a subsequent Ramp-up Procedure (where appropriate following PreStart Monitoring) shall recommence as for start-up.

Reporting

15. Full reporting on MMO operations and mitigation undertaken must be provided to the Regulatory Authority as outlined in Appendix 6 of NPWS (2014).

References

NPWS (National Parks and Wildlife Service), 2014. Guidance to manage the risk to marine mammals from man-made sound sources in Irish waters. Department of Arts, Heritage and the Gaeltacht, Dublin.

Southall, B.L., Bowles, A.E., Ellison, W.T., Finneran, J.J., Gentry, R.L., Greene Jr, C.R., Kastak, D., Ketten, D.R., Miller, J.H., Nachtigall, P.E. and Richardson, W.J., 2008. Marine mammal noise-exposure criteria: initial scientific recommendations. *Bioacoustics*, *17*(1-3), pp.273-275.

Southall, B.L., Finneran, J.J., Reichmuth, C., Nachtigall, P.E., Ketten, D.R., Bowles, A.E., Ellison, W.T., Nowacek, D.P. and Tyack, P.L., 2019. Marine mammal noise exposure criteria: updated scientific recommendations for residual hearing effects. *Aquatic Mammals*, *45*(2), pp.125-232.

Part E: Template for Supporting Information

This application form should provide a summary of the evidence that the applicant has provided. In all cases, it is necessary to provide separate supporting information so that the assessment of the application can be undertaken in a robust and comprehensive manner. Applicants should refer to guidance provided by the NPWS and the European Commission whilst preparing this application form and the supporting information.

It is essential that supporting information is prepared in a consistent manner using the template below so that NPWS officials assessing the application can locate the relevant evidence to determine if the three Tests can be met. Failure to provide sufficient evidence will result in the application being refused.

The structure of the Supporting Information should be as follows:

1) Table of Contents

2) Introduction
    a. Objective of the proposed works (for example, as part of construction of a national road, repair of roofing, undertaking surveys etc.)
    b. Name, qualifications and relevant experience of scientific staff, including trainees, (e.g. ecologist) involved in the preparation of the application and those responsible for carrying out the proposed activity.

c. If this application is for the carrying out of surveys that may cause disturbance, qualifications of all involved must be provided and trainees must be clearly identified.

3) Background to proposed activity including location, ownership, type of and need for the proposed activity, planning history, policy context, zoning in relevant Development plan (or equivalent), etc.

4) Full details of proposed activity to be covered by the derogation (including a site plan). The site may be inspected by an NPWS representative, so the details given should clearly reflect the extent of the project. This information will be used to compare site conditions with the Method Statement.

5) Ecological Survey and site assessment (Not required for applications to carry out surveys)
   a. Pre-existing information on species at location and environs.
   b. Status of the species in the local/regional area (relevant to the consideration of the impact on the population at the relevant geographic scale (Test 3))
   c. Objective(s) of survey
   d. Description of Surveys Area
   e. Survey methodology (including evidence as to how the methodology represents best practice and is appropriate to the Objective). Methodology should include survey maps, details of timing, climate, equipment used and identify any uncertainties or difficulties encountered.
   f. Survey results including raw data, any processed or aggregated data, and negative results as appropriate. Photographs and maps must be provided where site-specific features are referred.
   g. Population size class assessment.

6) Evidence to support the Derogation Tests

   a. Test 1 - Reason for Derogation:
      i. There should be a clear explanation as to why a specific reason(s) has been selected in the application form.
      ii. Applicants are advised to read the guidance published by the NPWS 'Guidance on Applications for Regulation 54 Derogations for Annex IV species: Guidance for Applicants" with specific reference to Section 3.1.
   b. Test 2 - Absence of Alternative Solutions
      i. Applicants must list the alternatives to the proposed activity that have been considered, including the do-nothing alternatives in a clear and objective manner. A basic requirement is that these alternatives should be compared in terms of their impact on the species subject to strict protection. It should be clear to NPWS officials as to why the chosen approach has been selected.
      ii. Applicants are advised to read the guidance published by 'Guidance on Applications for Regulation 54 Derogations for Annex IV species: Guidance for Applicants" with specific reference to Section 3.2.
   c. Test 3 - Impact of a derogation on Conservation Status
      i. Applicants should include details of the population at the appropriate geographic scale and an evaluation of how the proposed activity will affect the conservation status both before and after mitigation measures have been applied.
      ii. Full and detailed descriptions of proposed mitigation measures that are relevant to the potential impact on the target species. Evidence that such mitigation has been successful elsewhere should be provided, where available.
      iii. Applicants are advised to read the guidance published 'Guidance on Applications for Regulation 54 Derogations for Annex IV species: Guidance for Applicants" with specific reference to Section 3.3.

7) Monitoring the impacts of the derogations
   a. Applicants must include details of how they propose to verify whether the derogations have been implemented correctly and whether they achieved their objective, using scientifically

based evidence, and, if necessary, how the applicant will take corrective measures where required.

b. Applicants should provide details of proposed reports to be submitted to the NPWS including the results of monitoring.
c. Applicants are advised to read the guidance published by the European Commission "Guidance document on the strict protection of animal species of Community interest under the Habitats Directive" with specific reference to Section 3.4.

Part F. Declaration

I declare that all of the foregoing particulars are, to the best of my knowledge and belief, true and correct. I understand that the deliberate killing, injuring, capturing or disturbing of protected species, or damage or destruction of their breeding sites or resting places or the deliberate taking or destroying of eggs is an offence without a derogation and that it is a legal requirement to comply with the conditions of any derogation I may be granted following this application. I understand that NPWS may visit to check compliance with a derogation.

Please note that under Regulation 5 of the European Communities (Birds and Natural Habitats) Regulations 2011-2021 an authorised officer may enter and inspect any land or premises for the purposes of performing any of their functions under these Regulations or for obtaining any information which they may require for such purposes.

Signature of the Applicant  **Date** 25/11/25

Name in BLOCK LETTERS Dr Michael Andrew Clare

PRIVACY STATEMENT

See Privacy Statement at www.npws.ie/licences

npws.ie

Department of Housing, Local Government and Heritage

An Roinn Tithíochta,
Rialtais Áitiúil agus Oidhreachta
Department of Housing,
Local Government and Heritage